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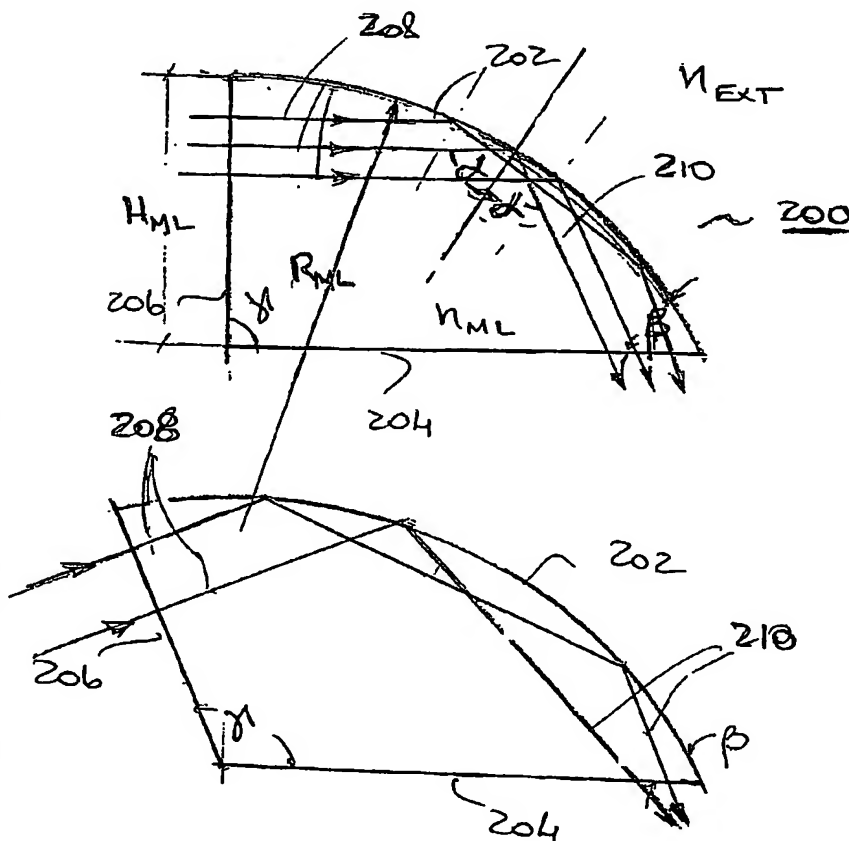
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(54) Title: **INTEGRATED MICROLENS REFLECTOR AND LIGHT COUPLER**



(57) Abstract: A microlens reflector (200) and light coupler comprises a material transparent to light of a predetermined wavelength bound by an envelope with a curved section (202) and at least two non-parallel flat sections (204, 206), the curved section (202) operative to reflect internally light entering the component through one flat section (206), the reflected light directed to leave the component through its other flat section (204). The microlens reflector can reflect and couple light from one optical element into another optical element, e.g. from a waveguide into a detector, and from a light source into a waveguide. Arrays of integrated microlens reflectors (700) may be used to couple optical fibers to on-chip optical waveguides in NxM optical cross-connects and switches, providing simple, true 3-dimensional optical coupling architectures.



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